

Appl. No. 09/744,271  
Atty. Docket No. AA333  
Amdt. dated January 25, 2005  
Reply to Office Action of October 25, 2004  
Customer No. 27752

## REMARKS

### Application Amendments

Claims 1-10 are pending in this application and all claims stand rejected. Claims 1 and 10 were previously amended in a Preliminary Amendment filed January 22, 2001. Claim 5 was previously amended in view of a statutory 35 U.S.C. 101 double patenting rejection.

Currently, Claims 1 and 10 are further amended in order to clearly define R<sup>52</sup> as a hydrogen or an alkyl group having from about 1 to about 30 carbons. Support for this amendment can be found in the specification at page 4, first paragraph, lines 1-2.

Claims 1 and 10 have been further amended to further define that the hair conditioning composition is a leave-on composition. Support for this amendment can be found in the specification at page 53, line 25 and page 57, line 14.

Claims 1 and 10 have been further amended to further define that the hair conditioning composition comprises a humectant comprising a polyethylene glycol having a molecular weight of up to about 1000. Support for this amendment is found in the specification at page 8, lines 9-12. No new matter has been added.

### Invention Synopsis

The present invention is directed to a hair conditioning composition comprising: (1) an acrylic acid/alkyl acrylate copolymers; (2) an amphoteric conditioning polymer; (3) an aqueous carrier; (4) a humectant comprising a polyethylene glycol having a molecular weight of up to about 1000; and wherein the hair conditioning composition is a leave-on-conditioner composition.

The compositions of the present invention provide hair conditioning compositions suitable for leave-on use which provide improved conditioning benefits to the hair such as smoothness, softness, and reduction of friction, are easy to apply on the hair, and leave the hair and hands with a clean feeling.

### 35 U.S.C. 112, Second Paragraph Rejection

Claims 1-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The Examiner has stated that in Claims 1 and 10, "R<sup>52</sup> as defined above" is indefinite. Applicants have amended Claims 1 and 10 in order to clearly define R<sup>52</sup> as a hydrogen or an alkyl group having from about 1 to about 30

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carbons. Support for this amendment can be found in the specification at page 4, first paragraph, lines 1-2. Applicants kindly request reconsideration.

#### Double Patenting Rejection

Claims 1-10 have been provisionally rejected under the judicially created doctrine of obvious-type double patenting as being unpatentable over Claims 1-10 of copending application No. 09/744,269 in view of Kang et al (WO 97/23194). In setting forth this rejection, the Examiner indicated that a timely filed Terminal Disclaimer over these common owned applications would overcome the rejection.

Responsive to this rejection, a Terminal Disclosure under 37 C.F.R. 1.321(c) for the above-entitled application which specifies that the Petitioner disclaims the terminal part of the statutory term of any patent granted on the above entitled application which would extend beyond the expiration date of the full statutory term defined in 35 U.S.C. §154 to §156 and §173 as shortened by any terminal disclaimer filed prior to the grant of any patent granted on pending Application Number 09/744,269, was previously submitted on May 16, 2003 and a copy of which is attached with the present response. Upon the submission of the Terminal Disclaimer, Applicant will thus obviate the provisional obviousness-type double patenting.

#### Art Rejections

##### 35 U.S.C. § 103(a)

Claims 1-10 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Karlen et al (US Patent No. 6,004,545) in view of Hitchen (US Patent No. 6,106,816), Kang et al (WO 97/23194) and Rath et al (US Patent No. 5,993,792).

The Examiner has asserted that while Karlen et al. teaches hair cleansing compositions comprising copolymers of carboxylic acid such as Carbopol 1342, amphoteric conditioning polymers, aqueous carriers and silicon compounds, Karlen et al does not teach a humectant, a viscosity modifier, a visible particle, an UV absorber, an optical brightener, and herbal extract and conditioning agents. The Examiner asserts that it would have been prima facie obvious to a person of skill in the art to add Merquat 100 to the composition of Karlen et al to achieve the benefit of an additional conditioning agent in view of Hitchen and to further add visible particles, a humectant and viscosity modifiers of Kang et al to the composition of Karlen et al to achieve the benefit of stabilizing and ensuring the homogenous dispersion of a hair cleansing composition.

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Karlen et al disclosing hair cleansing compositions containing from 0.1 to 30 percent by weight of a dimethylsiloxanemethyl-3-mercapto-propylsiloxane/isobutylmethacrylate copolymer and from 3 to 50 percent by weight of at least one detergent surfactant. The composition can also contain dimethylsiloxane and glycol copolymers and or polydimethylsiloxanes with or without hydroxy terminal groups. This composition has a definite fixing effect as well as satisfactory hair cleaning action.

Karlen et al does not disclose nor suggest a leave-on hair conditioning composition of the present invention, as now amended. Karlen et al specifically teaches cleansing compositions or shampoo compositions. Further, as the Examiner has previously pointed out, Karlen et al et al does not disclose or suggest the use of a humectant comprising a polyethylene glycol having a molecular weight of up to about 1000; which the present invention comprises, as now amended.

The benefit of the present invention is due to an acrylic acid/alkyl acrylate copolymers which, together with other required elements, which provides favorable aesthetic benefits, conditioning benefits such as smoothness and softness, and leaves the hair and hands with clean feeling when the composition of the present invention is intended for use as leave-on products. However, Karlen et al does not disclose or suggest the benefit of the present invention such as leaving the hair and hands with clean feeling when the composition of the present invention is intended for use as leave-on products, nor the relationship between the benefit and the use of an acrylic acid/alkyl acrylate copolymers. Thus, Karlen et al does not disclose and provides no motivation to select some components included in shampoo-conditioning compositions for providing a leave-on hair conditioning composition of the present invention, nor to use a an acrylic acid/alkyl acrylate copolymers in the composition, nor to use a humectant comprising a polyethylene glycol having a molecular weight of up to about 1000.

Kang et al relates to shampoo-conditioning compositions. Kang et al discloses in Example 1 a shampoo composition comprising Unishpere, dimethicone and some polymers such as PVM/MA Dccadiene Crosspolymer. Kang et al also discloses shampoo compositions containing Carbomer in comparative examples, as well as humectants and viscosity modifiers such as thickeners in the Examples and on page 13 lines 20-21. However, Kang et al does not disclose nor suggest a leave-on hair conditioning composition of the present invention, as now amended. Further, Kang does not disclose a humectant comprising a polyethylene glycol having a molecular weight of up to about 1000. All of the Examples of Kang et al comprise propylene glycol, hexylene glycol, or pyrrolidone carboxylic acid. The broad disclosure of "humectants" on page 13, line 21 specifically refers to the making of Comparative Examples 1-4, which specifically

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comprise pyrrolidone carboxylic acid and propylene glycol. Further, Kang et al would clearly not lead or motivate one of skill in the art to a leave-in-conditioner compositions comprising a humectant comprising a polyethylene glycol having a molecular weight of up to about 1000, as now required in the present invention.

Applicants have surprisingly found that a humectant provides the leave-in-conditioner composition with conditioning benefits wherein a polyethylene glycol having a molecular weight of up to 1000, provides less stickiness when compared to low molecular weight humectants, such as propylene glycol, as disclosed by Kang et al. When compared to polyethylene glycols having a molecular weight higher than 1000, the present invention's humectant provides improved transparency and solubility.

Further, as disclosed on page 14, lines 25-33, Kang et al teaches that the comparative examples, which use the Carbopol 1342, are less stable when compared to the Kang et al examples using the PVM/MA Decadiene Crosspolymer. Therefore, Kang et al is further teaching away from the use of the Carbopol-1342 due to less stability. Clearly, one of skill in the art would not be led to present invention, by the teachings of Kang et al in combination with the other references. Therefore, one of skill in the art would not be lead by the teaching of Kang et al to combine the teachings of Karlen et al, Hitchen, or Rath et al because one would not have a reasonable expectation to succeed in achieving or improving the properties of the composition.

Further, the broad teaching in Hitchen disclosing the use of cationic polymeric conditioning agents in shampoo compositions and the further general teaching in Rath et al of the use of optical brighteners, herbal extracts and UV absorbers would not led one of skill in the art to the leave-in conditioners of the present invention.

Specifically, Hitchen discloses shampoo compositions comprising cationic polymeric conditioning agents such as Merquat 100 and Merquat 550 (column 4, line 37 and column 5, lines 8-10). The Examiner has asserted that it would have been prima face obvious to a person of skill in the art to add Merquat 100 to the composition of Karlen et al to achieve the beneficial effect of an additional conditioning agent in view of Hitchen. However, Applicants have taught, as found on page 38, lines 1-6, that additional conditioning agents are selected according to the compatibility with other components, and the desired characteristic of the product. For example, components of cationic nature (emphasis added), will be included in an amount which would not cause separation in view of the essential components of anionic and amphoteric nature. Applicants have found cationic polymers, such as Merquat 100 and Merquat 550 can negatively interact with an acrylic acid/alkyl acrylate copolymers, as defined in the present invention. Applicants have found that the amphoteric conditioning polymers have better compatibility with the acrylic

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acid/alkyl acrylate copolymers, than do the cationic polymers such as Merquat 100 and Merquat 550, as disclosed by Hitchen. Therefore, one of skill in the art would not be led to the teachings of Hitchen due to the cationic nature of the conditioning agents which can negatively interact with an acrylic acid/alkyl acrylate copolymers.

Applicants respectfully submit that Karlen et al does not meet the limitations set forth in the present invention and further would not render the present invention as obvious when combined with the teachings of Kang et al, Hitchen and Rath et al. None of the references teach a humectant comprising a polyethylene glycol having a molecular weight of up to about 1000, which is a component of the present invention, as now amended. Therefore, one of ordinary skill in the art would not have been lead to modify the compositions of Karlen et al by adding or combining the "further comprising" ingredients as disclosed in Kang et al, Hitchen and Rath et al.

#### No Prima Facie Case

The Examiner has asserted that the combination of agents, each of which is known to be useful individually for the same purpose, into a single composition useful for the very same purpose, here, hair cleansing, is prima facie obvious. At least additive therapeutic effects would be reasonably expected. However, Applicants would like to point out that the present invention is not for the very same purpose. The single composition of the present invention is not for the same purpose of hair cleansing. The single composition of the present invention is for the purpose of a leave-on-conditioner, as supported in the specification and claims. A leave-on conditioner has a very different purpose when compared to hair cleansing composition. Therefore, the combination of agents, some of which are known to be useful individually for a hair cleansing composition, are now present in a single composition useful for a different purpose. Therefore, no prima facie obvious has been established.

In order to establish a prima facie cast of obviousness, the Examiner must show that (1) there is some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings, (2) there is a reasonable expectation of success, and (3) all of the limitations of the claims are taught or suggested in the prior art (M.P.E.P. § 2143).

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Applicant respectfully traverses this obvious rejection as Karlen et al in view of Kang et al, Hitchen, and Rath et al does not establish a prima facie case of obviousness because they do not teach or suggest all of the Applicant's claim limitations. None of the references alone or in combination teach a leave-in-conditioner comprising the combination of a (1) an acrylic acid/alkyl acrylate copolymers; (2) an amphoteric conditioning polymer; (3) an aqueous carrier; (4) a humectant comprising a polyethylene glycol having a molecular weight of up to about 1000; and wherein the hair conditioning composition is a leave-on-conditioner composition, as required in the present invention.

In particular, as stated above, specifically none of the references, alone or combination teach a leave-on conditioner. All of the references are directed toward a hair cleansing composition. Further, none of the references, alone or in combination teach a humectant comprising a polyethylene glycol having a molecular weight of up to about 1000. Therefore, there is no prima facie case of obviousness since none of the references, either alone or when combined, teach or suggest all of the Applicant's claim limitations with regard to the claimed requirements.

In light of the arguments presented herein, it is respectfully submitted that the rejection of the claims under 35 U.S.C. § 103(a) be withdrawn.

### Conclusions

Applicants have made an earnest effort to place their application in proper form and distinguish their claimed invention from the prior art which was applied in the October 25, 2004 Office Action. WHEREFORE, consideration of this application, withdrawal of the rejections under 35 U.S.C § 112, second paragraph, double patenting, withdrawal of the rejections under 35 U.S.C § 103(a), and allowance of Claims 1-10 are respectfully requested.

Respectfully submitted,

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